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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/209,982	12/09/1998	MICHAEL KAPLINSKY	08305/050001	6236

7590 01/30/2004

Micron Technology, Inc.  
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2101 L Street, NW  
Washington, DC 20037-1526

EXAMINER
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VILLECCO, JOHN M

ART UNIT	PAPER NUMBER
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2612

DATE MAILED: 01/30/2004

19

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/209,982

Applicant(s)

KAPLINSKY, MICHAEL

Examiner

John M. Villecco

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-9 and 11-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-9 and 11-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION III

#### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 14, 2003 has been entered.

#### *Response to Arguments*

2. Applicant's arguments filed November 14, 2003 have been fully considered but they are not persuasive.

3. Applicant has amended the claims to emphasize the fact that the invention applies a weight factor to the error measure. However, the amendment does not overcome the rejection from the previous action. Applicant argues that Kim shows neither "*applying a weight factor to each said error measure for each of said plurality of reference colors*", nor "*obtaining a color correction matrix which is adjusted to minimize said respective weighted error measure*". As mentioned in the previous office actions, the examiner agrees that Kim fails to show applying a weight factor to each of the error measures. However, Yamaguchi was brought in to show that it is well known in the art to apply weight factors to specific colors in order to provide more emphasis to desired colors. In this case it would have been obvious to one of ordinary skill in the

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art at the time the invention was made to apply weight factors to the error measures of Kim so that certain colors are emphasized more than others.

On the other hand, the examiner disagrees with the applicant's assertion that Kim fails to show obtaining a color correction matrix which is adjusted to minimize the error measure of the reference colors. As mentioned in the previous office actions, it is clear from the specification of Kim that an error measure between the input scanning data and what is to be expected is minimized. Since an error between the two input data is minimized, an error would inherently have to be calculated. (See Figure 9, and col. 19, lines 1-12). Furthermore, applicant argues on page 9, that Kim fails to teach or suggest "obtaining a color correction matrix to minimize said error measure or weighted error measure for each of said plurality of reference colors". However, Kim teaches that a color correction coefficient matrix is generated which reduces the error between the scanned data and the reference data (col. 13, lines 52-54).

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

For the reasons stated above, the rejection from the previous office action will be repeated.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 1, 3-9, and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim (U.S. Patent No. 6,320,668) in view of Yamaguchi (Japanese Publ. No. 02-074367**

**A).**

6. Regarding *claim 1*, Kim discloses a color correction apparatus and method in an imaging system. Kim discloses obtaining reference outputs from an image sensor using a color image array (20). The reference outputs are derived from a chromaticity chart shown as reference number 12 in Figure 3. The chromaticity chart includes the primary colors (red, green, and blue) as well as 21 additional colors for a total of 24 colors. The system receives an input from a colorimeter and compares it to the input reference data. The system then operates to reduce an error between the colorimetric scanning data and the data obtained by scanning the chromatic test pattern (12) by computing a color coefficient correction matrix. See column 13, lines 40-64 and column 21, lines 18-50. In this manner the system is optimized for each of the input colors and color-corrected image is obtained.

However, Kim fails to disclose weighting certain colors more than others. Yamaguchi, on the other hand, discloses that it is well known in the art to weigh some colors more than others when constructing a color correction matrix. See the abstract. By choosing certain colors to be weighted more than others, the system is placing more emphasis on specific colors. By

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placing more emphasis on certain colors such as flesh tones, the colors which are important and to which the eyes are more sensitive will be emphasized, thus producing a higher quality image. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to emphasize the error measurements of specific colors in Kim so that colors which are important to an image are given more weight, thereby forming a better image.

7. As for *claim 3*, as shown in column 21, lines 18-50, Kim discloses calculating a minimum value for each of the error values of the red green and blue components of the input colors. In this case the reference is denoted as  $P_{Ri}$ ,  $P_{Gi}$ , and  $P_{Bi}$ . The input colorimetric data is denoted as  $\underline{P}_{Ri}$ ,  $\underline{P}_{Gi}$ , and  $\underline{P}_{Bi}$ .

8. Regarding *claim 4*, Kim discloses using 24 colors in the color chart (12). Thus, the system uses at least 7 colors. See column 12, lines 15-30.

9. As for *claim 5*, Kim discloses using 24 colors in the color chart. See column 12, lines 15-30.

10. With regard to *claim 6*, Kim discloses a color correction apparatus and method in an imaging system. Kim discloses obtaining reference outputs from an image sensor using a color image array (20). A spectral optical system is used which includes a color resolution filter (col. 7, lines 45). The system outputs spectral information regarding the RGB colors (col. 13, lines 46 and 47). This amounts to an interpolation to determine all color components that impinge on the pixel. The reference outputs are derived from a chromaticity chart shown as reference number 12 in Figure 3. The chromaticity chart includes the primary colors (red, green, and blue) as well as 21 additional colors for a total of 24 colors. The system receives an input from a colorimeter and compares it to the input reference data. The system then operates to reduce an error between

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the colorimetric scanning data and the data obtained by scanning the chromatic test pattern (12) by computing a color coefficient correction matrix. See column 13, lines 40-64 and column 21, lines 18-50. The color correction-processing unit acts as the image interpolator since it performs the color correction. In this manner the system is optimized for each of the input colors and color-corrected image is obtained.

However, Kim fails to disclose weighting certain colors more than other. Yamaguchi, on the other hand, discloses that it is well known in the art to weigh some colors more than others when constructing a color correction matrix. See the abstract. By choosing certain colors to be weighted more than others, the system is placing more emphasis on specific colors. By placing more emphasis on certain colors such as flesh tones, the colors which are important and to which the eyes are more sensitive will be emphasized, thus producing a higher quality image. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to emphasize specific colors so that color which are important to an image are given more weight, thereby forming a better image.

11. Regarding *claim 7*, Kim discloses that the color chart (12) includes red, green, blue, white, and 20 additional colors. See column 12, lines 15-30.

12. As for *claim 8*, Kim discloses using 24 colors in the color chart. See column 12, lines 15-30.

13. With regard to *claim 9*, as shown in column 21, lines 18-50, Kim discloses calculating minimum value for each of the error values of the red green and blue components of the input colors. In this case the reference is denoted as  $P_{Ri}$ ,  $P_{Gi}$ , and  $P_{Bi}$ . The input colorimetric data is denoted as  $\underline{P}_{Ri}$ ,  $\underline{P}_{Gi}$ , and  $\underline{P}_{Bi}$ .

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14. With regard to *claim 11*, as mentioned above in the rejection of claim 6, it is obvious to weight colors which are important (and to which the eye is more sensitive to), higher than other colors, so that a higher quality image is formed. It is well known in the art that red, green, and blue are very important colors, and thus it would have been obvious to one of ordinary skill in the art to weigh these colors more than the dull colors.

15. Regarding *claim 12*, Kim discloses using each color of the color chart (12) to produce a color correction matrix. See column 11, line 65 to column 12, line 41.

16. As for *claim 13*, Kim discloses a color correction apparatus and method in an imaging system. Kim discloses obtaining reference outputs from an image sensor using a color image array (20). A spectral optical system is used which includes a color resolution filter (col. 7, lines 45). Inherently a color filter operates to supply only light of a certain wavelength to the pixel which it covers. The system outputs spectral information regarding the RGB colors (col. 13, lines 46 and 47). The reference outputs are derived from a chromaticity chart shown as reference number 12 in Figure 3. The chromaticity chart includes the primary colors (red, green, and blue) as well as 21 additional colors for a total of 24 colors. The system receives an input from a colorimeter and compares it to the input reference data. The system then operates to reduce an error between the colorimetric scanning data and the data obtained by scanning the chromatic test pattern (12) by computing a color coefficient correction matrix. See column 13, lines 40-64 and column 21, lines 18-50. In this manner the system is optimized for each of the input colors and color-corrected image is obtained.

However, Kim fails to disclose weighting certain colors more than other. Yamaguchi, on the other hand, discloses that it is well known in the art to weigh some colors more than others



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when constructing a color correction matrix. See the abstract. By choosing certain colors to be weighted more than others, the system is placing more emphasis on specific colors. By placing more emphasis on certain colors such as flesh tones, the colors which are important and to which the eyes are more sensitive will be emphasized, thus producing a higher quality image.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to emphasize specific colors so that color which are important to an image are given more weight, thereby forming a better image.

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- **Endo (U.S. Patent No. 6,256,062)** discloses correcting color using a color chart wherein the user can select a specific color to weight more than the others. See column 6, line 46 to column 7, line 29. Additionally, Endo discloses optimizing an error between a reference signal and an input signal (col. 10, lines 10-21).

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

or faxed to:

(703) 872-9306 (For either formal or informal communications intended for entry. For informal or draft communications, please label "**PROPOSED**" or "**DRAFT**")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,  
Arlington VA, Sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John M. Villecco whose telephone number is (703) 305-1460.

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The examiner can normally be reached on Monday through Thursday from 7:00 am to 5:30 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber, can be reached on (703) 305-4929. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the customer service desk whose telephone number is (703) 306-0377.



JMV  
1/12/04



NGOC-YEN VU  
PRIMARY EXAMINER